

## PEIRCE, MEAD, AND THE OBJECTIVITY OF MEANING\*

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This paper shows parallelisms between the philosophies of George H. Mead and Charles S. Peirce. Because they both view cognition from the social realist's perspective, they independently developed equivalent triadic theories of meaning. It is further argued that their pragmatic account of meaning logically leads to belief in the objectivity and communality of truth and scientific knowledge. This reveals their opposition to the nominalistic and individualistic view of truth and knowledge sometimes embraced in contemporary sociology of knowledge.

In his introduction to Mead's Selected Writings, Andrew Reck (1964:xlili) observed that it is necessary to go back to Charles Peirce to find a speculative genius, working from pragmatic principles, who equals the daring of Mead.<sup>1</sup> As far as I have been able to determine, regrettably few have taken that journey.<sup>1</sup> Morris (1938:110-111), in one of the better known attempts to relate the thoughts of Peirce and Mead, noted that because Peirce approached his problems as a logician while Mead approached his as a social psychologist, coupled with the fact that no obvious influence of Peirce on Mead is discernible, their convergences and their differences are more significant. Morris emphasized their differences more than their convergences; consequently, in dwelling on their divergences, Morris might lead one to overlook the similarities between their philosophies.

The purpose of this paper will be to reverse that focus because their convergences are at least as instructive as their differences. Most sociologists read Mead and ignore Peirce, and many philosophers do the opposite. This is understandable, given Peirce's and Mead's difference in approach; however, because their writings complement each other, one can, by seeing the same points presented in a different way, broaden his understanding of Mead by reading Peirce and vice versa.

Gallie (1966:31) suggests that Mead and others working in the pragmatic tradition have been following, consciously or unconsciously, in the steps of Peirce. The fact that Mead's writings virtually never referred to Peirce implies that whatever influence Peirce had on Mead's thought must have been indirect and unknown to Mead. It seems likely that much of this influence came through James. Mead was James' student, and James and Peirce were life-long friends (Reck, 1964:lviii).

I shall claim that, despite the clear differences stated by Morris, there remain significant parallelisms between the philosophies of Peirce and Mead. The analysis will center upon their views of truth, meaning, and scientific knowledge. Finally, these views will be related to the question of the relativity of truth, raised by the sociology of knowledge. Specifically, it is a common thesis of the sociology of knowledge that since one views the world within the con-

lines of some particular Weltanschauung, he can never know that what appears as truth within that framework (of which he is a prisoner) is the truth as it really is. Consequently, all truth claims are relative to the socio-historical context they presuppose and are meaningless outside that situation.

Signification is the communication of ideas. Peirce and Mead argue that signification is possible only when both interactants attach the same meaning to their symbols. This is a common sense observation, and yet the mere fact that men are able to effectively communicate through signs and symbols carries with it profound epistemological implications. Such communication requires that both communicants share similar perceptual experiences; otherwise, it would be impossible for them to consistently associate the same object to a common symbol. This, in turn, implies that, since people of divergent social origins can communicate effectively on a broad range of topics, they can agree upon perceptual judgments (e.g., that the top of the desk is brown) even though they may occupy radically different social positions. This shared basis for perceptual judgments provides the foundation which makes language possible; furthermore, it makes the scientific method possible and creates the objectivity of the scientific perspective (see Mead, 1964:306-319). All of this may appear to be common sense, but it is important to make it explicit whenever philosophers (for example, Winch, 1958) import philosophy's 'other minds' problem into sociology, thereby arguing in favor of the a priori impossibility of nomothetic social science. Such philosophers need to be reminded that although epistemology may call percepts into question, science must necessarily postulate the reality of what is perceptually given. Equally important, if the thoughts of other minds could never be inferred from what is given in perception, the skeptic, Peirce and Mead would argue, could not give expression to his contentions because language is impossible without having a community of minds capable of signifying the same object to each other. This is the heart of the triadic theory of meaning shared by Peirce and Mead.

Peirce developed the realist thesis further by contending that because the scientific community bases its beliefs on perceptual judgments whose content is beyond human control, it logically follows that the scientific community would, if given an indefinite amount of time, reach complete consensus, and their beliefs would be true without reservation. This final step in Peirce's argument against relativism seems to leave Mead behind, though possibly not far behind.

### The Problem of Meaning

Peirce and Mead took, as a common point of departure, the question: how is language possible? While Peirce was concerned to lay bare the whole logical substructure of symbolic communication, Mead was more crucially interested in the social and psychological processes which mediate symbolic behavior. Consequently in presenting Peirce, I shall limit myself to those aspects of his philosophy which bear direct relevance to Mead's interests. This is necessary because, although Peirce and Mead had many of the same insights, Peirce's theory of meaning was far more developed conceptually and terminologically than Mead's theories.<sup>2</sup>

The foundation of Peirce's philosophy was his logic, the formal doctrine of signs. Peirce (2.228)<sup>3</sup> stated that a sign is something which stands to somebody for something in some respect or capacity. In a more detailed definition, he (2.303) characterizes a sign as being "anything which determines something else (its interpretant) to refer to an object to which itself refers (its object) in

the same way, the interpretant becoming in turn a sign, and so on ad infinitum." By this, Peirce meant that the interpreter's response to a sign is directed toward the same object as is the sign of which it is the interpretant.

This relation will be further amplified in a latter section, but let us consider an example which, for illustrative purposes, is somewhat oversimplified. If someone comments that it is about to rain, one hearing that statement might go outside and raise the windows of his car. This action is the interpretant of the sign (i.e., the statement that it is going to rain), and both the sign and interpretant refer to the same object--namely, the existing atmospheric conditions. Also, the action of raising the car's windows might cause another person to notice the weather conditions. This demonstrates Peirce's principle that every interpretant can serve as a sign having the same object as has the sign of which it is the interpretant. Thus, in principle, the sign-interpretant chain may proceed indefinitely.

As stated, the interpretant is the response of the interpreter to the sign (5.475), or, as Mead (1934:78) notes, ". . . the response of one organism to the gesture of another in any given social act is the meaning of that gesture." Mead also realized the distinction between the object of the sign and the interpretant of the sign. He observes that signification has a double reference, one to the thing indicated (Peirce's 'object') and the other to the response (Peirce's 'interpretant') (Mead, 1964:246).

One of the problems of this doctrine is that if the sign-interpretant process is conceived as being a continuing and indefinite progression (i.e., every sign, by definition, must have an interpretant, and every interpretant must serve as a sign for a subsequent interpretant), then the theory is incapable of explaining the origins of 'consciousness' or 'mind' since Peirce's thought-sign and Mead's significant symbol presuppose the existence of reflective intelligence. Peirce and Mead were both aware of the problem. Peirce argued that the sign-interpretant chain is analogous to a certain type of mathematical series which contains no first term or last term. This defense seems inadequate since the sign-interpretant process necessarily operates within the spatial and temporal limits of the human condition whereas no such limits are involved in purely mathematical sequences. Mead's solution is somewhat less dependent upon analogy.

According to Mead, gestures are distinguishable on the basis of whether they require symbolic convention. Clearly, the human race existed long before people developed the ability to communicate with significant symbols. Yet, as Mead implies, humans did have the ability to communicate through more primitive methods (non-significant gestures). Mead concludes that if we regard these non-linguistic forms of communication as prior to the emergence of 'mind,' then the development of reflective intelligence, by the human race, as well as by the individual, can be explained in terms of a gradual movement from the "rudimentary form" of social experience to understanding and communication through significant symbols. Thus, the development of 'mind' or 'consciousness' can be seen as a natural stage in the evolution of the interaction process rather than as an ontologically inexplicable presupposition of symbolic communication (Mead, 1934:50).

Actually, Peirce's logic implicitly contained all of the conceptual apparatus necessary to give a full account of Mead's theory of the evolution of consciousness. In order to develop this point, it will unfortunately be necessary to review some of Peirce's neologisms. Since signs involve a triadic relationship between sign, object, and interpretant, it is possible to characterize a sign

in three different ways:

1. According to the nature of the sign itself.
2. According to the way the sign denotes its object.
3. According to the relationship between the sign and its interpreter. (Since these relations are purely logical and have no direct relevance to Mead, they will not be analyzed.)

By the first of the trichotomies of signs (as Peirce called them), a sign is either a qualisign, a sinsign, or a legisign. A qualisign is a "quality which is sign" (2.244). The feeling of any particular color is an example of a qualisign. A sinsign is "an actual event or existent thing which is a sign (2.245). A sinsign can act as a sign only through its qualities; hence, sinsigns require qualisigns. However, these qualisigns have no significance individually, but collectively function as a sign in virtue of being embodied in the same object or event. For example, we identify a particular type of bird by attending to a number of its qualities (size, color, shape) none of which may be individually sufficient to signify that particular type of bird but which collectively have that capacity. Finally, a legisign is a type of rule or law which can only denote its object by means of some agreed upon convention; consequently, every legisign can function only through what Peirce called its "replica": a special type of sinsign which would not be significant "if it were not for the law which renders it so" (2.246). Peirce cites the word "the" as an example of a legisign. It can be employed through a variety of sinsigns (e.g., it can be spoken, printed, carved in stone, et cetera). In any case, all of these sinsigns are replicas of the same legisign and would be meaningless without their connection to it.

There exists, therefore, a hierarchy of dependence between legisigns, sinsigns, and qualisigns since legisigns require sinsigns in order to denote their objects and sinsigns require qualisigns. However, ordinary sinsigns and qualisigns function as signs without recourse to legisigns. Primitive man learned to recognize horses long before he developed legisigns; indeed, this type of non-verbal experience is, as Mead (1934:50ff.) noted, a prerequisite to the emergence of language.

Peirce's second trichotomy (icon, index, symbol) affords a further indication of the distinction between verbal and non-verbal modes of signification. As was noted, the first trichotomy characterized signs simply on the basis of their form of appearance. The second trichotomy distinguishes signs according to the means by which they refer to their objects. "An icon is a sign which refers to the object that it denotes merely by virtue of characters of its own . . ." (2.247). Thus, an icon acts as a sign simply because its qualities resemble its object. For example, a portrait is an icon of the person it represents. Note that the sign-object relation of resemblance exists even if no interpreter perceives it as such, but of course the icon can only function as a sign when it is interpreted as denoting its object.

A second type of sign-object relation is the index, which Peirce defines as "a sign which refers to the object that it denotes by virtue of being really affected by that object" (2.248). That is, there is an actual physical connection between an index and its object. Peirce gives the example of a weathervane, which is an index because there is a direct physical relation between the direction the weathervane points and the direction that the wind is blowing (2.286). Another example of an index is a rap on the door since there is a causal connection between the knock on the door (the index) and the presence of someone outside (its object). Again, notice that, like the icon, the index's sign-object relation exists even

though it may not be interpreted.

The third type of sign of the second trichotomy is the symbol, which Peirce (2.249) describes as a sign which "refers to the object that it denotes by virtue of a law, usually an association of general ideas, which operates to cause the symbol to be interpreted as referring to that object." It is the counterpart of the legisign. Thus, a word denotes its object simply by virtue of its agreed upon identification with it. Consequently, the symbol, unlike the index or icon, requires an interpretant; otherwise, it not only fails to be a sign, it also has no object. As Mead (1934:181) writes, "A symbol is nothing but the stimulus whose response is given in advance." The capacity to compel the interpreter to respond to its object is the distinguishing mark of the symbol.

From this, it is clear that of the icon, index, and symbol, only the symbol presumes language. This again suggests the hypothesis that man may have developed the capacity for reflective thought (and, hence, the significant symbol) only after experiencing the more "rudimentary forms" of the social process through icons (e.g., hieroglyphics) and indices (e.g., facial and bodily gestures) (cf. 2.338). Mead never tired of insisting that the self is not given antecedent to all experience, but rather that it emerges from the initial stages of interaction in the social process. It is only when one can recognize an external object as external that it becomes possible to represent objects to himself. As Peirce (1.324) likewise recognized, "We become aware of ourself in becoming aware of the not-self."

It is unfortunate that Peirce never extended the elements of his logic in a more completed theory of the emergence of consciousness as did Mead. Perhaps, as Morris (1938:110-111) noted, it was Peirce's preoccupation with logic and Mead's stress on social psychology which caused them to pursue different implications of their basically shared analysis of meaning structures.

#### Truth, Community, and Science

Peirce and Mead agreed that signification occurs only when each interactant attaches the same meaning to every symbol and that this requires a language community. Thus, the object of a sign or significant symbol is necessarily open to public agreement. These considerations led Peirce to the conclusion that since the determination of scientific knowledge involves propositions, it must also be a communal action. Furthermore, because science is a pragmatic and communal practice, the ultimate beliefs of the scientific community would necessarily be true. Although Mead did not share Peirce's boundless optimism in the potential of science, he did agree that truth and knowledge are inextricably bound to the notion of community--with many of the same consequences seen by Peirce.

One can approach their conception of the role of community in science and knowledge by analyzing what Peirce would call the interpretants of a sign or what Mead would term the response of the second organism to the gesture of the first. Peirce divided the interpretant into four elements: the emotional interpretant, the energetic interpretant, the logical interpretant, and the ultimate logical interpretant. As I will show, although Mead was not as systematic as Peirce, he did recognize these distinctions.

As noted, the interpretant is the response of the interpreter to a sign, but upon closer examination, it can be seen to have a number of possible components. The emotional interpretant is "a feeling which we come to interpret as evidence

that we comprehend the proper effect of the sign . . ." (5.475). Peirce adds that in some cases such as a musical performance, the emotional interpretant is the only "proper significant effect" produced by the sign. Mead (1934:75) makes essentially the same point by referring to poetry as an illustration of the ". . . difference between the purely intellectual character of a symbol and its emotional character." If the sign is to produce any effect other than the emotional interpretant, it can only do so through some effort of the interpreter. This energetic interpretant, as Peirce called it, may simply consist of muscular responses such as "clenching of fists, grinding of teeth, . . . or else outflows of nervous energy" (Mead, 1964:109). However, the effort of the energetic interpretant is more often mental than physical. This mental effort may produce what Peirce (5.476) called the logical interpretant, which is "closely related" to the meaning of a general concept. For example, if upon hearing thunder, one thinks of rain, that thought is the logical interpretant of the sign (thunder). Yet many times we do not consciously think about the sign--especially if it is quite familiar and expected. Mead (1934:72) tells the story of the absent-minded college professor who started to dress for dinner, but finally found himself in his pajamas in bed because ". . . he did not think about what he was doing. The later action was not a stimulus to his response but just carried itself out when it was once started." [emphasis mine] The logical interpretant can only occur when one conceptualizes the potential consequences of the sign. "The meaning can appear only in imagining the consequences of the gesture" (Mead, 1964:111).

But the thought which is the logical interpretant cannot be the last effect produced by the sign because the logical interpretant is "a single act," but the intellectual concept with which it is closely reflected is "of a general nature" (5.475; 5.467). Mead (1964:245) likewise writes that ". . . signification is not confined to the particular situation within which an indication is given. It acquires universal meaning." One source of this generality of reference in concepts is that signification ". . . takes place through the individual generalizing himself in the attitude of the other,"<sup>4</sup> or, when the concept is represented to oneself rather than another, its indication occurs through the interplay of the 'I' and the 'me.'

There is another and perhaps more fundamental explanation of the general nature of intellectual concepts. Most signs one encounters are perceptual objects. We relate to physical objects in our environment nearly all of the time that we are awake. Because we experience millions of percepts, we are only rarely aware of the inferential character of perception. Peirce (2.141) states that percepts are "mental constructions, not the first impressions of sense", and, consequently, we know them "inferentially and most imperfectly." We perceive in terms of categories created out of past experience; that is, to perceive an object in the environment as being an 'x' is to perceive it as having the sensible qualities remembered as characteristic of an 'x.' This inference usually functions as a conditioned subconscious response component in perception. We only become conscious of this element when perceiving an unfamiliar object or event. For example, when one notices a rare bird, he probably first perceives a bird (in the generalized sense), but later perceives it as a bird of a specific type. Again, Mead is very close to Peirce on this point. He writes, "A physical object or percept is a construct in which the sensuous stimulation is merged with imagery which comes from past experience" (1964:134).

The meaning of a concept is, therefore, constituted by all that one has learned to associate with its object. This Peirce (5.491) called the ultimate logical interpretant:

The deliberately formed, self-analyzing habit---self-analyzing because formed by the aid of analysis of the exercises that nourished it--- is the living definition, the veritable and final logical interpretant. Consequently, the most perfect account of a concept that words can convey will consist in a description of the habit which that concept is calculated to produce.

Mead seems to follow Peirce very closely in the assertion that the final interpretant consists of one's habits of response toward the object of the concept. "The general habit of reacting to objects of a certain class, such as a book, must be got before the mind's eye before a recognition of the meaning of a book can appear. . . Furthermore the contents in consciousness which answer to the meaning of objects are our generalized habitual responses to them" (Mead, 1964:129). Mead cites an example that is very illustrative because it clearly displays Peirce's four elements of the interpretant. When someone observes the footprint of a bear in the snow, the footprint is a sign (more technically, it is an index), and the bear is its object. The person's response (interpretant) consists of a feeling of fear (emotional interpretant) along with various physiological changes (energetic interpretant). At the same time, there is the thought of a bear (the logical interpretant) or, as Mead succinctly puts it, "The footprint means a bear." The person then runs away, furthers the hunt, or performs some other action consistent with his set of behavioral habits toward bears under the conditions he perceives, and the habit which this experience creates or strengthens is the ultimate logical interpretant of the concept 'bear' (cf. Mead, 1934:121).

From this pragmatic theory of meaning, both Peirce and Mead went on to develop a correspondingly pragmatic definition of truth quite unlike that of some other pragmatists, particularly James and Schiller. Peirce (5.552) remarked, "Mr. Ferdinand C. S. Schiller informs us that he and James have made up their minds that the true is simply the satisfactory. No doubt, but to say 'satisfactory' is not to complete any predicate whatever. Satisfactory to what end?"

To define truth in such a way makes its determination dependent upon human values. On this account, truth may ultimately depend upon the values of any organized group which has sufficient social and political power to enforce consensus on those values (cf. Huber, 1972; Mead, 1964:328). Peirce, horrified by such prospects, desired to rest truth upon a reality "independent of the vagaries of you and me." Such a reality must be a world which exists independent of mind and which has the capacity to compel our sensations to take a particular form. Our perceptual judgments, according to Peirce, answer to this condition. We cannot voluntarily control the contents of perception (e.g., we cannot see as blue an object which appears red).

Mead's philosophy of science is also based on this premise. Feyerabend and other recent philosophers of science contend that competing scientific theories may be, and sometimes are, "incommensurable." That is, each theory presumes a different vocabulary by which experimental observations are described, and these vocabularies rest upon mutually exclusive epistemological postulates. Consequently, it is impossible to translate from one theory to the other; therefore, one cannot rationally evaluate them in terms of how closely they approximate the truth. This, of course, would return us to the thesis that truth is relative and subjective. Although two scientists observe through different theories, Mead holds that there remains a core content to their perceptions which make cumulative

science possible. He observes,

For each there was a different world that was there, but in these worlds there were actual or identical observations of individuals which connect these worlds with one another and enable the latter thinker to take up into his own the worlds that have preceded his. The common content of these observations, by means of which different worlds are strung together in human history, depends upon the assumption that different individuals have had or would have the same experiences (Mead, 1950:61-62).

This core consists in what Peirce (5.157) called 'perceptual judgments'---judgment absolutely forced upon my acceptance, and that by a process which I am utterly unable to control and consequently unable to criticize." Hence, these judgments form the ultimate basis for all factual beliefs. Peirce held that the truth of a factual proposition consists in a correspondence between the sign which is the subject of the proposition and the predicate which is its object. To state the relation more accurately, albeit confusingly, truth is the correspondence of the asserted correspondence between the subject and predicate of a proposition to the actual state of affairs (its object) which the proposition purports to represent. This seems to be the type of relation Peirce had in mind when he emphatically uttered, "Truth is the conformity of a representamen [sign] to its object, its object, ITS object, mind you" (5.554). Mead (1964:339) made an equivalent claim:

Having anatomized reality into relata and the relations, truth of the judgment is found in a correlation between these and the cognitions which answer to them in the mind. We find a new set of relations and relata, that lying between things and the awareness of the mind. If these relations offer the same pattern of structure as that which they answer to in nature, we have the test of the truth of the logical pattern as it appears in the judgment.

An understanding of the analysis of truth defended by Peirce and Mead is necessary in order to grasp their view of the nature and purpose of scientific inquiry. They held that the quest for scientific knowledge begins when one experiences doubt and ends when one establishes belief through experimentation. Peirce notes, "The irritation of doubt is the only immediate motive for the struggle to attain belief. . . . With the doubt, therefore, the struggle begins, and with the cessation of doubt it ends" (5.375). Thus, Peirce maintains that the purpose of science is to replace doubt with belief. One might object that it is not belief which science seeks, but true belief. Peirce counters that such a position is groundless because once belief is established on any question we are entirely satisfied regardless whether that belief is true or false. "When doubt ceases, mental action on the subject comes to an end; and, if it did go on, it would be without a purpose" (5.376). Peirce adds that it might be granted that we seek beliefs which we "think to be true" (5.375), but this is a simple tautology because we think all of our beliefs to be true. We may recall that Peirce contended that the preferred method of establishing beliefs is the scientific method because it determines our beliefs by perceptual judgments, and our thinking has no effect upon the content or permanency of these judgments. Or, as Peirce (5.384) noted:

There are Real things [which] affect our senses according to regular laws, and, through our sensations are as different as are our



relations to the objects, yet, by taking advantage of the laws of perception, we can ascertain how things really and truly are.

Mead's view of the purpose and course of scientific inquiry is, in some important respects, quite similar to Peirce's. First, he insists that inquiry, necessarily begins with doubt and continues for the sole purpose of resolving conflicting hypotheses. "Thinking . . . is always the solution of a problem" (1964:129). And again, "[Judgment]. . . does not attain truth until experience can proceed where it was inhibited" (1964:338). Finally, "The test of truth which I have presented is the ongoing of conduct, which has been stopped by a conflict of meaning. . ." (1964:328). Mead also agreed with Peirce that scientific method must rest upon perceptual judgments and that such a method ". . . can only be applied where a reality which is not called into question sets the conditions to which any hypothetical solution must conform" (1964:333). Third, Mead wholeheartedly accepted Peirce's 'fallibilism' -- the position that no factual proposition can be known with absolute certainty (cf. 1.152ff). For example, Mead cautions that "there is no such thing as Truth at large. . . nor does the scientist. . . endow his data with the logical form of such final meanings" (1964:325).

However, Mead's fallibilism arises from a different source than does Peirce's, and this difference reveals what seems to be a point of divergence between Peirce and Mead on the question of the relativity of truth. As previously quoted passages suggest, Mead identified truth with the solution of a problem--an inner conflict between behavioral dispositions (cf. 1964:129-130). He clearly stated, "Truth is then synonymous with the solution of a problem" (1964:328). Obviously, since there can be no such thing as a problem in general, there can be no truth in general given Mead's definition of truth. All truth, then, must be relative to a specific problematic context. This leaves open a serious ambiguity. It fails to specify any temporal requirements that a problem solution must meet in order to be called true. Certainly Newtonian physics allowed conduct to proceed in an 'uninhibited' manner for many years. Yet we certainly would not say that it is true or even that it was true. Using Mead's truth formula, one might be forced to hold that it was true until its practice was seen to create problems. But this states the relation backwards. Newtonian physics created problems because it was (in part) false rather than, being false, because it created problems. In other words, its falsity was not constituted by the fact that it created problems, but rather, it created problems as a consequence of its falsity. A similar line of reasoning can, of course, be applied to true propositions and their consequences.

If Mead is given a more sympathetic interpretation or if we assume that he was simply confused, the above criticism can be avoided without giving up the notion that the doubt-belief dialectic is the prime mover of science. Such an interpretation would construe the problem solution as the test of true propositions rather than as the defining feature of them and would re-establish, as the definition of truth, the correspondence of a propositional sign to its object. This would bring us closer to Peirce's position. For Peirce, the existence of an ongoing community is as crucial to the establishment of truth as it is to the development of symbols. Individually, we are all subject to a multitude of idiosyncrasies which may interfere with assuming the objectivity of the idealized scientific observer. To a lesser extent, the whole scientific community at any particular time is itself influenced by the social and political pressures of the times, and, consequently, its activities and findings reflect somewhat the interests represented by those pressures. Peirce held that science can therefore discover truth only if we assume the scientific community to be extended

indefinitely into the future, thereby transcending the limitations of composition and spatio-temporal location. Peirce believed that, given this notion of the extended community, science would necessarily discover truth. This derives from the self-correcting method of subjecting hypotheses to the test of perceptual judgments. Since perceptual judgments are independent of human opinion, Peirce felt that, if science persists indefinitely in its method, it will be led inexorably toward truth; therefore, the beliefs which the scientific community would ultimately hold must be true. Conversely, any proposition which is false must ultimately come into conflict with perceptual judgment, and this would cause the scientific community to cease believing it. In the short run, we can never know any proposition about the world with certainty because, as Hume would remind us, it is always conceivably possible that future experience will prove it false (cf. 5.311). Peirce admits that there is no reason to suppose that the community will continue forever, but "there is nothing in the facts to forbid our having a hope, or calm and cheerful wish, that the community may last beyond any assignable date" (2.654). It can be added that, even if Peirce's wish is destined to go unfulfilled, that outcome would have no bearing on his identification of the real with the scientific community's ultimate beliefs because that argument is expressed in conditional terms.<sup>5</sup>

Although Mead apparently never identified reality with the beliefs of a projected community, he did share Peirce's belief that science and scientific knowledge are necessarily communal: ". . . I shall claim that the analysis of experimental science . . . never operates in a mind or an experience that is not social" (1964:53). And again, "In the field of any social science the objective data are those experiences of the individuals in which they take the attitude of the community. . ." (1964:310). He also suggests that it is its experimental method that accounts for the universality of the perspective of the scientific community. There is even some indication that he shared the Peircean thesis that there is no truth which is, in principle, unknowable. For example, he declared ". . .there is no nature that can be closed to mind" (1964:310-311).

### Conclusion

One can summarize that Peirce and Mead were united in their opposition to the epistemological individualism, popularized in modern philosophy by Descartes, which reduces the epistemic relation to a dualistic association between a socially isolated mind and its sensations. Peirce and Mead contend that this obfuscates the fact that meanings develop and function in the social context of past experience and future expectations. This renders them analyzable only in terms of a triadic relation between a symbol, object signified, and the socially objectified response to it. Moreover, since meaning necessarily involves community, knowledge and truth, being propositional, must also be the object of a community rather than of insulated individuals. Peirce pushes the position further by arguing that although the beliefs of the scientific community are fallible in the short run, its method ensures that, given the extension of the community indefinitely into the future, the community would reach consensus, and those beliefs would be the truth. There seems to be little evidence that Mead reached Peirce's conclusion, but there is ample indication that he did (inconsistently) support Peirce's premises. It is indeed clear that Peirce's pragmatic doctrine of truth and meaning can provide much of the foundation for Mead's social psychology. Unfortunately, Peirce is only beginning to receive recognition for his profound contributions.

# Footnotes

\*I am indebted to Joan Huber for her valuable comments on earlier drafts of this paper.

<sup>1</sup>Rosenthal's (1969) essay is one of the more noteworthy exceptions, and there may be others which my efforts have failed to locate.

<sup>2</sup>For example, Peirce developed ten basic classes of signs (with such forbidding names as Rhematic Indexical Legisign) which he later expanded to sixty-six. These classifications become redundant and therefore add little to the original divisions.

<sup>3</sup>This reference is to Volume II, paragraph 228 of the Collected Papers of Charles Sanders Peirce. All references to Peirce will be in this format, following the style of the editors.

<sup>4</sup>Peirce, incidentally, antedated Mead on the notion of the 'generalized other' which he termed 'retroconsciousness' (5.586).

<sup>5</sup>There are, however, a number of possible objections to Peirce's arguments. I will not develop them here. By the 1890's, Peirce became aware of these defects, and made substantial changes in his position.

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